

REMARKS

Upon entry of the above amendment, claims 1-14 will have been amended to enhance the clarity of the claims without narrowing the scope thereof. Further, no claims will have been newly submitted or canceled. Accordingly, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections together with an indication of the allowability of all of the claims in the present application, in due course.

Initially, Applicants thank the Examiner for acknowledging the claim for foreign priority and for confirming receipt of the certified copy of the priority document. Applicants also express their gratitude to the Examiner for considering the documents cited in the Information Disclosure Statements of October 1, 2001 and November 8, 2001. Further, Applicants thank the Examiner for accepting the drawings.

In the Official Action, the Examiner objected to the specification and asserted that the abstract exceeds 150 words. To overcome the Examiner's objection, Applicants have amended the abstract to be of proper form (i.e., length). Accordingly, Applicants respectfully request withdrawal of the objection to the abstract.

Further, the Examiner rejected claims 1-14 under 35 U.S.C. §101 and asserted that the claims are not directed towards a useful process, machine, method of manufacturing, or composition of matter.

Applicants respectfully traverse the 35 U.S.C. §101 and submit that the specification and the claims are directed towards providing a practical application and producing a useful, concrete, and tangible result.

For example, the method, as recited, is for creating (or generating) analysis model data and for automatically extracting elements/shapes from the model data. That is, the claimed method is not merely a mathematical procedure, as asserted by the Examiner. Rather, the method, as recited, is directed towards a useful process and is thus in full compliance with statutory subject matter.

Furthermore, Applicants submit that the specification clearly indicates that the generation of analysis model data is useful in structural and fluid analysis (e.g., by providing data inputs, i.e., elements, necessary for the analysis). The elements generated e.g. claim 1 facilitate in shape model creation. In this regard, Applicants submit that support for such uses can be found, for example, on pages 13-14, as well as elsewhere in the specification.

Further, the present invention is configured to automate the division of shape data into elements while reducing the number of elements without degrading the analysis accuracy. Moreover, the advantages provided by Applicants' invention are even explicitly stated, for example, on pages 67-71 of the specification, as well as in other parts of the specification. Additionally, Applicants also direct the Examiner's attention, for example, to Figures 28-29 regarding exemplary and explanatory representations and applications of the

analysis model data. Moreover, while Applicants' claims generate elements, whereas FUJII results in mesh data, both are statutory.

Accordingly, as the present invention, as recited in the claims, is clearly directed towards statutory subject matter, as supported by the specification, Applicants respectfully request withdrawal of the 35 U.S.C. §101 rejection.

Further, in the Official Action, the Examiner rejected claims 1-14 under 35 U.S.C. §102(a) as being anticipated by FUJII et al. (U.S. Patent No. 6,405,151).

Applicants submit that the rejection is inappropriate at least since FUJII does not properly qualify as a reference under 35 U.S.C. §102(a). Rather, FUJII issued as a patent on June 11, 2002, which does not predate Applicants' filing date of June 29, 2001. Accordingly, for at least this reason, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §102(a).

Additionally, Applicants submit that the rejection is also inappropriate even under 35 U.S.C. §102(e) at least since FUJII does not disclose or suggest each and every feature as recited in the claims. For example, FUJII does not disclose creating an interference polygon with respect to each voxel that interferes with the shape data, as recited. Rather, FUJII is directed towards composing three-dimensional data obtained by measuring an object from multiple viewpoints and generating surface mesh data. That is, FUJII appears to be unconcerned with extracting an element of a predetermined shape, as recited in the claims, but appears to be concerned with obtaining defined surface data from polygon mesh data and intermediate surface data. Further, there is no disclosure in FUJII of

determining voxel interference with shape data, as recited in the claimed combinations.

Moreover, FUJII also fails to disclose the creation of an interference polygon using interference surfaces between the shape data and the interior of the voxel, as recited. Rather, in FUJII, the set of polygons in the polygon mesh data are formed using range image data in which each point is connected to adjacent points to obtain a square or triangular polygon (column 1, lines 23-40).

Furthermore, contrary to the Examiner's assertions, column 3, lines 15-25 of FUJII is not directed towards extracting polygons on the basis of a relationship between a plurality of vertexes of the divided polygon, as recited. Rather, FUJII explicitly discloses that polygons are extracted based on "the added potential value", which is a value determined by summing the potential values, wherein a potential value is determined on the basis of a distance dx from the voxel on a line of sight to a point x in a polygon of the mesh (column 2, lines 11-30; column 7, lines 36-51). That is, FUJII is not directed towards extracting polygons on the basis of a relationship between a plurality of vertexes of the divided polygon, as recited. Moreover, FUJII does not disclose a divided polygon and relationship between the vertexes thereof, as recited in the claimed combinations.

Thus, as FUJII clearly fails to anticipate or render obvious each and every claimed feature, as recited, Applicant respectfully requests withdrawal of the rejection, as well as an indication of the allowability of all pending claims in the present application.

In view of the amendments and arguments herein, Applicants submit that claims 1, 5, 13-14 are in condition for allowance. With regard to dependent claims 2-4 and 6-12, Applicants submit that they are allowable on their own merit, as well as because they depend either directly or indirectly from independent claim 1, 5, 13-14, which Applicants have shown to be allowable.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections of the claims, as well as an indication of the allowability of each of the claims in view of the herein-contained remarks.

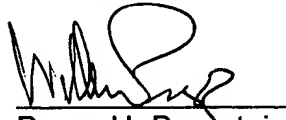
SUMMARY AND CONCLUSION

Applicants believe that the present application is in condition for allowance, and respectfully request an indication to that effect. Applicants have amended the claims to enhance clarity only and argued their allowability. Accordingly, reconsideration of the outstanding Official Action and allowance of the present application and all the recited claims therein are respectfully requested and now believed to be appropriate.

The amendments to the claims made in this amendment have not been made to overcome the prior art, and should be considered to have been made for a purpose unrelated to patentability. Accordingly, no estoppel should be deemed to attach thereto.

Should the Examiner have any questions or comments regarding this Response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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